

By the present invention, implicit color commands within a page description file are converted to, and replaced by explicit color commands. After the conversion, the color values that once were implicitly defined in the page description file are now specified by the explicit color commands and can be accurately modified.

In the Office Action of May 31, 2006, the Examiner rejected Claims 1, 2, 4-11, 13-19, 21-27, 29-33, 35-39 and 41-43 under 35 U.S.C. 103(a) as being unpatentable over Vyncke et al. (USPN 5,926,185) in view of Adobe Illustrator 8.0. The Examiner rejected Claims 3, 12, 20 and 44-50 under 35 U.S.C. 103(a) as being unpatentable over Vyncke et al. in view of Illustrator and further in view of IBM Technical Disclosure Bulletin (IBM). Applicants respectfully traverse the rejections.

The Vyncke et al. Disclosure:

The Vyncke et al. patent relates to processing PDL commands to overcome problems related to printing process imposed constraints such as the inability to render lines of a thickness below a minimum threshold, to reduce registration errors inherent in the printing process, and to accommodate a limited number of inks available in a printer. Vyncke et al. also suggest processing the PDL commands to eliminate irrelevant and unnecessary commands in the page description file.

To accomplish these goals, Vyncke et al. interpret a PDL file to generate a list of graphical objects such as vectors, splines, text, and continuous tones. The position, color, size, and grouping of the objects are also identified and listed. Eliminating irrelevant and unnecessary commands then optimizes the list, and the PDL commands are modified accordingly.

The Examiner has referred specifically to the Color Mapping section of the Vyncke et al. patent, starting at line 45 of column 5. In that section, Vyncke et al. suggest producing a color database of all colors used in the PDL file, analyzing the complete color database, and eliminating redundancies. A color that is a tint of another color is considered to be a redundancy by Vyncke et al. Accordingly, Vyncke et al. propose replacing an explicit color value that identifies a tint of a base color with an implicit color command that defines the tint as a percentage amount of the base color.

Vyncke et al. further suggest analyzing the complete color database for colors that are blends of two other colors and eliminating them from the color database by replacing their explicit color values with an implicit color command that defines the percentage of each of the blended colors.

Vyncke et al. Teach Away From the Present Invention:

Independent Claim 1 relates to a method for modification of color values in a page description file by identifying implicit color commands within the page description file, converting these identified implicit color commands to explicit color commands, and modifying color values specified by the explicit color commands.

In contrast, the section of Vyncke et al. referred to by the Examiner discloses replacing an explicit color value that identifies a tint of a base color or a blend of two colors with an implicit color command that defines the tint or blend as a percentage amount of the base color(s). While this serves Vyncke et al.'s goal of eliminating irrelevant and unnecessary commands in the page description file, it is the opposite of converting implicit color commands to explicit color commands so that the explicit color values may be accurately modified to provide enhanced color fidelity.

"[A] reference must have been considered in its entirety, for disclosures which taught away from the invention as well as disclosures which directed one skilled in the art towards the claimed subject matter." *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.* 227 USPQ 657,666 (Fed. Cir., 1985).

Independent Claims 10 and 18 relate to features similar to Claim 1, but are directed to a computer-implemented system and a computer-readable medium, respectively. They are allowable for the reasons set forth above with respect to Claim 1.

There is an improper combination of art because the function of Vyncke et al.'s teaching is changed or destroyed with the combination:

Claims 1, 10 and 18 stand rejected as being obvious over Vyncke et al. in view of Illustrator. Illustrator suggests manually changing the commands of a page description file to overcome printing difficulties. According to the Office Action, Illustrator teaches converting an implicit color command into a set of explicit color commands. On the other hand, Vyncke et al. rely on replacing an explicit color value with an implicit color command. To modify Vyncke et al. so

that implicit color commands are replaced by a set of explicit color commands, as suggested by the Examiner, would render Vyncke et al.'s goal of eliminating irrelevant and unnecessary commands in the page description file unattainable; and the function of Vyncke et al. would be destroyed with the combination.

There Is No Disclosure In The References To Support Their Combination:

Assuming arguendo that all features of Claims 1, 10 and 18 are taught by a combination of Vyncke et al. and Illustrator, there is no teaching or suggestion that provides motivation for a person skilled in the art to combine the references. "The question of obviousness under 35 U.S. C. 103 is not what a routineer could have done but what it would have 'been obvious' for such a person to do." *Ex parte Marinaccio*, 10 USPQ 2d 1716 (PTO Bd App & Inter, 1989) citing *Ortho Kinetics Inc. v. Safety Travel Chairs*, 1 USPQ 2d 1081 (Fed. Cir. 1986)

The Examiner proposes that the motivation for combining Vyncke et al. and Illustrator hinges on Illustrator's suggestion to convert implicit color commands into explicit color commands if there is difficulty printing files of implicit commands. The Examiner cites the following passage in the Vyncke et al. patent to show that Vyncke et al. are interested in overcoming difficulty in printing files, and would look to Illustrator for a way to overcome such difficulty: "it is desirable to edit page description color commands to improve printing quality" (page 3 of the Office Action at line15-17).

However, the problem of improving printing quality addressed by Vyncke et al. would not be overcome by converting implicit color commands into explicit color commands. Vyncke et al. note that some commercial printers have constraints imposed by the printing process itself. These constraints include the inability to render very thin lines, to reduce registration errors inherent in the printing process, to accommodate a limited number of inks available in a printer, and to eliminate irrelevant and unnecessary complexity in the original PostScript file. These enumerated constraints would not benefit from a conversion of implicit color commands into explicit color commands. In fact, Vyncke et al. overcomes their printing quality problem by replacing an explicit color value with an implicit color command. Since Vyncke et al. is already dealing with PDL files of explicit color values there would be no reason to turn to Illustrator's teaching of converting implicit color commands into explicit color commands.

Insofar as Vyncke et al. teaches the conversion of explicit objects to implicit objects, the Examiner's proposed combination of Vyncke et al. and Illustrator would appear to be inapposite. On one hand, the process of Vyncke et al. converts explicit objects to implicit objects, and on the other hand, the Examiner is arguing that a skilled person would have been motivated to essentially undo this process of Vyncke et al. via the teaching of Illustrator. There appears to be no reason, whatsoever, for a person of ordinary skill in the art to perform the contradictory processes of Vyncke et al. and Illustrator in any combination.

There is no motivation to one skilled in the art to modify the subject matter of the primary reference in light of the teachings of the secondary reference, unless the prior art suggested the desirability of the modification. Further, "it is impermissible [sic.] to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 23 USPQ2d 1780 (CAFC 1992).

It is well established in the law that, for a proper prima facie rejection of a claimed invention on the basis of obviousness under 35 U.S.C. 103, the references relied upon must teach every element of the claimed invention. If a combination of references is cited in support of such a rejection, there must be some affirmative teaching in the prior art which suggests the proposed combination. Second guessing is not permissible. The Examiner's attention is invited, in this respect, to Orthopedic Equipment Company, Inc. et al. v. United States, 217 USPQ 193, 199 (CAFC 1983), where the Court stated, "Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law."

The references in combination do not disclose the claimed invention.

Assuming arguendo that the references might be capable of combination, there is at least one limitation in the claimed invention that is not disclosed by the references individually or in combination. To establish *prima facie* obviousness, all the claim limitations must be taught or suggested by the prior art. *See* MPEP 2143.03. "Each element of a claim is material." *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 227 USPQ 657,666 (Fed. Cir., 1985).

Claims 1, 10 and 18 include the limitation of modifying color values that are specified by the explicit color commands. That is, according to the claimed invention, implicit color commands are converted to explicit color commands and then modified. This process improves color fidelity of an output device relative to conventional color value modifications that would otherwise occur with respect to the implicit commands.

Vyncke et al. does not disclose modification of explicit commands of color values. To the extent that Illustrator may disclose the conversion of implicit commands to explicit commands, the process of Illustrator is manually performed when a user is having difficulty with the printing. Nothing in Illustrator concerns the modification of color values.

Claims 2, 4-9, 11, 13-17, 19 and 21-25 Are Patentable:

Claims 2 and 4-9 depend from Claim 1 and are patentable therewith for the reasons set forth above. Claims 11 and 13-17 depend from Claim 10 and are patentable therewith for the reasons set forth above. Claims 19 and 21-25 depend from Claim 18 and are patentable therewith for the reasons set forth above.

Claims 3, 12, 20 and 44-50 Are Patentable:

In the Office Action of May 31, 2006, the Examiner rejected Claims 3, 12, 20 and 44-50 under 35 U.S.C. 103(a) as being unpatentable over Vyncke et al. in view of Illustrator and further in view of IBM Technical Disclosure Bulletin (IBM). Applicants respectfully traverse the rejection.

First, Claims 3, 12 and 20 depend from Claims 1, 10 and 18, respectively, and are patentable therewith for the reasons set forth above. Claims 3, 12 and 20 further require that converting the identified implicit color commands includes applying a conversion table to the implicit color commands, wherein the conversion table includes a library of explicit color commands for known implicit color commands.

The Office Action notes that IBM teaches color rendering dictionaries used with tables for color transformations. The Examiner suggests that it would have been obvious to use color rendering dictionaries with tables as disclosed by IBM to increase the speed of Vyncke et al. The rejection is traversed.

Vyncke et al. proposes processing PDL commands to overcome problems related to constraints imposed by the printing process such as the inability to render lines of a thickness below a minimum threshold, to reduce registration errors inherent in the printing process, and to accommodate a limited number of inks available in a printer. Vyncke et al. also suggest processing the PDL commands to eliminate irrelevant and unnecessary commands in the page description file. To accomplish these goals, Vyncke et al. interpret a PDL file to generate a list of graphical objects such as vectors, splines, text, and continuous tones. The position, color, size, and grouping of the objects are also identified and listed. The list is then optimized by eliminating irrelevant and unnecessary commands, and the PDL commands are modified accordingly.

The Examiner does not suggest how the use of color rendering dictionaries with tables as disclosed by IBM would increase the speed of the process described by Vyncke et al., nor how the task might be accomplished. After indicating a rejection under 35 USC 103, the Examiner must set forth (1) the difference or differences in the claim over the applied references, (2) the proposed modification of the applied references necessary to arrive at the claimed subject matter, and (3) an explanation why such proposed modification would be obvious (MPEP 706.02). In the rejection of Claims 3, 12 and 20, the Examiner has not set forth the proposed modification of Vyncke et al. in a way that would actually function to process PDL commands to overcome problems related to printing process imposed constraints such as the inability to render lines of a thickness below a minimum threshold, to reduce registration errors inherent in the printing process, to accommodate a limited number of inks available in a printer, or to eliminate irrelevant and unnecessary commands in the page description file.

Claims 44-50 should be allowed for at least the reasons advanced above with respect to independent claims 1, 10 and 18. Although the claims are not identical, the arguments advanced above with respect to 1, 10 and 18 also apply to the various features recited in independent Claims 44-50.

Claims 44-46 set forth that modification of the explicit color values is accomplished without raster image processor-converting the page description file. The Examiner's reliance on IBM is curious because IBM is specifically concerned with rasterization of the PS file.

Claim 50 recites a method for modification of color values in a page description file by modifying the color values specified by the explicit color commands, which were converted from the implicit shading command. Claim 50 requires that such modification of the color values specified by the explicit color commands is based on a profile of an output device, and that such modification results in the generation of a revised page description file. Nothing in Vyncke et al., Illustrator or IBM suggests such features.

Claims 26, 32 and 38 Are Patentable:

Independent claims 26, 32 and 38 call for modification of color values in a page description file. Implicit color commands are identified within the page description file and replaced by implicit color sub-commands. Color values specified by the implicit color sub-commands are modified, wherein each of the implicit color commands pertains to a spatial area, and each of the implicit color sub-commands pertains to a sub-section within the spatial area.

Like Claims 1, 10 and 18, Claims 26, 32 and 38 require modification of color values. Unlike claims 1, 10 and 18, however, Claims 26, 32 and 38 require conversion of implicit color commands to implicit color sub-commands, rather than explicit commands.

In rejecting Claims 26, 32 and 38, the Examiner argues that Illustrator teaches the conversion of implicit color commands to implicit color sub-commands. However, for the rejections of Claims 1, 10 and 18, the Examiner argued that Illustrator teaches the conversion of implicit color commands to explicit color commands. Clearly, these arguments by the Examiner are mutually exclusive. In fact, the “expand” command discussed in Illustrator does not generate implicit sub-commands as required by Claims 26, 32 and 38. However, in the alternative, if the objects generated by Illustrator are construed by the Examiner as being implicit sub-commands, then they could not also be reasonably construed as explicit commands. The Examiner cannot attribute the same features of Illustrator to contradictory features of different claims. Either the rejections of claims 1, 10 and 18 or the rejections of claims 26, 32 and 38 must be withdrawn given this contradiction in the Examiner’s rationale.

Applicants note, however, that given the further requirements of Claims 26, 32 and 38, this issue should be moot in the current application. For example, neither Vyncke et al. nor Illustrator discloses or suggests the

modification of color values specified by the implicit color sub-commands as required by Claims 26, 32 and 38.

Claims 27 and 29-31 Are Patentable:


Claims 27 and 29-31 depend from Claim 26 and are patentable therewith for the reasons set forth above. Claims 33, and 35-37 depend from Claim 32 and are patentable therewith for the reasons set forth above. Claims 39 and 41 depend from Claim 38 and are patentable therewith for the reasons set forth above.

Conclusion:

For the reasons set forth above, it is believed that the application is in condition for allowance. Accordingly, reconsideration and favorable action are respectfully requested.

The Commissioner is hereby authorized to charge any fees in connection with this communication to Eastman Kodak Company Deposit Account No. 05-0225. *A duplicate copy of this communication is enclosed.*

Respectfully submitted,

  
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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.